Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

aS1.9
76 Fm

LIBRARY
CURRENT SERIAL RECORD
★ JUN 24 1959 ★
U. S. DEPARTMENT OF AGRICULTURE

milk production in the soviet union

RECENT DEVELOPMENTS

Foreign Agricultural Service
U. S. Department of Agriculture
FAS-M-58 · May 1959

MILK PRODUCTION IN THE SOVIET UNION: RECENT DEVELOPMENTS

By Lazar Volin
Foreign Agricultural Analysis Division

In May 1957 Prime Minister N. S. Khrushchev initiated a new agricultural drive in the Soviet Union when he announced a goal to catch up rapidly with and even surpass the United States in per capita production of milk and meat.[1] As far as milk is concerned, Khrushchev believed the goal could be accomplished as early as 1958. The spectacular character of such an objective may be gaged from the fact that only a few years earlier the livestock industry was generally considered the weakest sector of Soviet agricultural economy. With the new campaign, the Soviet Government resumed publication of milk and other livestock production statistics, for which only fragmentary data had been disclosed since the prewar period.

Recent official reports claim that the Soviet's total milk production in 1958 slightly exceeded that of the United States. But its per capita production still lagged considerably behind because of a larger population in the Soviet Union (more than 200 million) than in the United States (175 million). Undoubtedly, the Soviets have made a great stride in milk production; nevertheless, an analysis of their statistics casts doubt on the extent of the claimed progress.

Production Increased

Soviet milk production has increased rapidly during the last 5 years, according to official Soviet statistics. Two related factors were mainly responsible for this upward trend. First, an improvement took place in the feed supply and management, which had long been weak elements in Soviet animal husbandry and, second, the number of cows increased by 37 percent between January 1, 1953, and January 1, 1959.

After Stalin's death in 1953, the new administration, under the leadership of Khrushchev, set out energetically to bolster the inadequate feed supply. The area under feed grains (corn, barley, and oats) and other fodder crops increased by 38 percent between 1953 and 1958.[2] Also, there were recently several good harvest years and the feed supply was probably better utilized through greater use of silage. Larger production of bread grains (wheat and rye) also helped, since this made it possible to reduce the use of the typical feed grains for human food. More feed was also available from the increased supplies of potatoes and some other crops. Since livestock was so poorly fed in the past, and there were many complaints of inefficient management in collective and state farms, the improved feeding and better management was bound to have a favorable effect on the productivity of the animals.

On the management side, there must be mentioned considerable improvement in the shelter, as a consequence of a large building program on collective farms, and especially better care of the animals on many farms, which resulted from the higher prices paid by the government for milk and consequent greater economic incentives to the farm workers. Complaints of inefficient management, however, are still often voiced by Soviet sources. In general, by Western standards, the use of farm labor in milk production has been too high in the Soviet Union. According to data given by Khrushchev himself,

[1] Pravda and Izvestiya, May 24, 1957.

[2] 1953--Narodnoe Khozyaistvo SSSR v 1956 Godu Statisticheskii Ezhegodnik. (Moscow, 1957); 1958--Report of the Soviet Representative at the X Session of the Agricultural Committee of the Economic Commission for Europe.

TABLE 1.--Milk production in USSR and United States, selected years

Year	U.S.S.R.			United States
	Cow's milk	Sheep & goat milk	Total milk	Cow's milk
	Million pounds	*Million pounds*	*Million pounds*	*Million pounds*
1940	72,355	1,808	74,163	109,412
1950	73,598	4,249	77,847	116,602
1951	74,877	4,828	79,705	114,681
1952	74,480	4,229	78,709	114,671
1953	75,549	4,864	80,413	120,221
1954	79,818	4,391	84,209	122,094
1955	90,677	4,141	94,818	123,128
1956	104,639	3,631	108,270	125,474
1957	117,589	3,113	120,702	125,939
1958	(1)	(1)	127,426	[2] 125,236

[1] Not available.
[2] Preliminary.

Official sources.

TABLE 2.--Cow's milk production in USSR by kinds of farms, selected years

Year	Collective farms	State farms[1]	Private sector
	Million pounds	*Million pounds*	*Million pounds*
1940	12,039	4,301	56,015
1950	14,284	4,541	54,773
1951	16,810	5,179	52,888
1952	18,415	5,653	50,412
1953	19,564	6,464	49,521
1954	22,549	6,872	50,397
1955	29,643	7,575	53,459
1956	38,362	8,369	57,908
1957	43,510	12,090	61,989

[1] Includes state farms proper and other state and cooperative enterprises.

Official Soviet sources.

production of 1 centner (220.46 pounds) of milk required 9.9 man-hours on Soviet state farms and 14.7 on collective farms, compared with only 4.7 man-hours on U. S. farms.[3] Khrushchev chided the tendency on collective farms to strive for very high records in milk production by wasteful labor practices, such as milking of cows three times a day. He preferred an increase in the number of cows tended per worker.[4]

[3] Report on Soviet agricultural developments at the session of the Central Committee of the Communist Party, Dec. 15, 1958. Pravda and Izvestiya, Dec. 16, 1958.
[4] Pravda and Izvestiya, Feb. 18, 1959.

In comparing published Soviet milk statistics with U. S. statistics, it should be borne in mind that until recently the former lumped together cow's milk and milk of sheep and goats. A breakdown is now available and is given in table 1.[5] U. S. statistics are for cow's milk only; milk of other animals is not reported because it is insignificant.

Inconsistencies

Certain inconsistencies are revealed by an examination of Soviet statistical data. First of all, a higher level of milk production than before the war was reported for the early 1950's during the last years of the Stalin regime, when it was officially admitted that the feed and livestock situation was unsatisfactory. For instance, cow's milk production in 1953 is claimed to have been 4 percent higher than in 1940, whereas the number of cows declined by 2 percent. (Averages of January 1, 1940 and 1941, and January 1, 1953 and 1954.)

More serious is the fact that during recent years there has been a spectacular rise claimed for the average production per cow of collective farm herds. The 1957 reported average production of 4,096 pounds per collective farm cow was nearly 83 percent above that of 1953.[6] This represents an increase probably far greater than attained in any other country during a similar period, even though it was an increase from a very low point. For many years average production per cow on collective farms was between 2,200 and 2,400 pounds. The magnitude of the claimed improvement in yields, therefore, arouses considerable skepticism.

TABLE 3.--Number of cows in USSR and United States, selected years

Year[1]	U.S.S.R.[2]			United States[3]
	Total	Collective farms	Collective and state farms[3]	
	Million head	*Million head*	*Million head*	*Million head*
1940	22.8	5.1	6.2	24.9
1941	27.8	5.7	6.9	25.5
1950	24.6	5.8	6.9	23.9
1951	24.3	7.0	8.2	23.6
1952	24.9	8.0	9.3	23.1
1953	24.3	8.5	9.9	23.5
1954	25.2	([5])	10.1	23.9
1955	26.4	([5])	11.2	23.5
1956	27.7	([5])	11.6	23.2
1957	29.0	([5])	12.6	22.9
1958	31.4	10.7	13.6	22.2
1959	33.3	([5])	([5])	[6] 21.6

[1] Beginning in January of year shown.
[2] All cows.
[3] Cows and heifers, 2 years old and over, kept for milk on farms only.
[4] Including all state and cooperative enterprises.
[5] Not available.
[6] Preliminary.

Official Soviet sources.

[5] The inclusion of sheep and goat milk in total 1956 Soviet milk figures was disclosed to the visiting team of agricultural economists of U. S. Department of Agriculture in Moscow in the summer of 1958. A breakdown since 1940 between cow's milk and total milk production was first published in a statistical handbook, entitled Zhivotnovodstvo SSSR (Moscow, 1959), p. 163.

[6] SSSR v Tsifrakh. Statisticheskii Sbornik (Moscow, 1958), p. 222.

The doubt regarding the high production figures is strengthened by the nature of the reporting methods employed. For the collective sector, there is a comprehensive system of milk production reports covering every collective and state farm. Yet the possibility of overreporting cannot be excluded for the collective sector, especially in the intense competitive atmosphere of striving to fulfill and overfulfill the high goals, though a likely threat of increased delivery quotas to the government should impose some restraint. However, the margin of error and opportunities for overestimation are even greater for the production of the privately owned cattle, scattered among many millions of households; for data on these the authorities must rely on small samples. The calculated average production per privately owned cow was 3,625 pounds in 1957. It is curious, however, that in one of the foremost collective farms of the country, Khrushchev's native village, Kalinovka, it was stated that the privately owned cows (prior to their sale by peasants to the collectives in the fall of 1957) averaged an equivalent of not more than 2,724 pounds of milk (1,200 liters).[7] This figure is more in line with historical production data than the above-mentioned higher quantities. If such an average were imputed to the whole privately owned herd, this alone would have resulted in a reduction of total production in 1957 by more than 15 billion pounds.

Another practice which reflects on the reliability of the reporting procedure in the early 1950's is the employment of rather arbitrary "correction," or upward adjustment of the farm reports on milk production. This practice was criticized in the Soviet press and was officially stated to have been abandoned in 1955. It is not known whether some other changes were made in the reporting procedure which may have tended to increase milk production figures, such as for instance, inclusion of milk sucked by calves. As to the latter, however, Soviet publications dealing with methods of collecting agricultural statistics indicate that milk sucked by calves is not supposed to be included in output figures, which corresponds to the practice followed in the United States.[8] Furthermore, Soviet specialists recommend hand feeding of, rather than sucking by, young calves.[9] Indications are that many collective farms are following the recommended practice. Indeed, it is possible that the raising of a larger number of calves in recent years on collectives by means of hand feeding, where the milk is included in output figures, rather than by letting the calves nurse, where the milk is not included, may have had an upward effect on total milk production figures, though not on the actual milk supply available for consumption.

In the light of various inconsistencies and peculiarities disclosed by this examination, it is difficult to accept the high official milk production figures for recent years at face value. At the same time, it is impossible to determine precisely the extent to which downward adjustments may be necessary. There are, unfortunately, no adequate data on utilization, which could serve as an independent check on production. Probably, figures of about 100 billion pounds of cow's milk in 1957 and 105 billion in 1958, while they may be still too high, nevertheless, are nearer reality.

If this analysis is correct, it indicates that there is still a considerable, though a narrowing, gap between the Soviet and the U. S. total milk production. The gap is wider when production is measured on a per capita basis. However, a further rise in milk output in the Soviet Union may be expected, with an increase in numbers and the productive capacity of the cattle herd as a result of better management, feeding, and breeding practices, notably, artificial insemination.

---

[7] Plenum Tsentral' nogo Komiteta Kommunisticheskoi Partii Sovetskogo Soyuza. 15-19 Dekabrya 1958 Goda. Stenograficheskii Otchet (Moscow, 1958), p. 221.

[8] See the standard Soviet reference dictionary on social-economic statistics--Slovar' -Spravochnik po Sotsial' no-Ekonomicheskoi Statistike, 2d ed. (Moscow, 1948), pp. 223 and 226. A textbook on agricultural statistics by S. L. Sholts, Statistika Sel' skogo Khozyaistva, (Moscow, 1956) p. 134, states that in order to obtain correct production figures, " it is necessary to include in gross milk production all actually obtained milk except milk sucked by calves, which is estimated only for purposes of zoo-technical evaluation of milk productivity of individual cows." See also: A. M. Bryanskii, Statistika Zhivotnovodstva, (Moscow, 1956), p. 122.

[9] For instance, a reference book for collective farm managers (Spravochnik Predsedatelya Kolkhoza, Tashkent, 1955, pp. 576-7) states categorically that hand feeding from the day of birth is " the best method" of raising calves and is critical of sucking by calves. The outstanding Russian authority on animal feeding, I. S. Popov, writes in his standard work (Kormlenie Sel' skokhozyaistvennykh Zhivotnykh, ed. 9, Moscow,, 1957, p. 326): " Calves of the dairy and meat-dairy types are weaned immediately after birth day and are handfed." A contrary view, criticizing this prevailing practice, is expressed by I. Kuzmin in Sel' skoe Khozyaistvo, August 13, 1957.

White-headed Ukranian cows in summer shelter, experiment farm southwest of Kiev. Summer shelter is important in the Soviet Union because pasture is limited in many districts.

Milking time on a large collective farm near Tashkent, Uzbek Republic. Even in cotton producing areas like this, the Soviets are emphasizing milk production.

Butter and Other Dairy Products

In the utilization of its milk supply, the Soviet Union has forged ahead in butter production, but it appears to be well behind the United States in production and consumption of other dairy products. Creamery butter output in the USSR increased by nearly 70 percent between 1953 and 1958, and in the latter year it exceeded that of the United States. Total Soviet butter production (creamery and on farms) was estimated in 1957 at 1,658 million pounds, compared with 1,549 million pounds in the United States. The Soviet Union became in recent years again a net exporter of butter after being on an import basis during and after World War II. In 1955, Soviet butter imports of 12.3 million pounds still exceeded the exports of 11.2 million pounds. In 1956, the reverse was true; exports reached nearly 58 million pounds as against 12.8 million of imports. In 1957, the last year for which detailed Soviet trade statistics are available, the Soviet Union exported more than 108 million pounds of butter and imported over 18 million pounds. These exports were to the Bloc countries. During the years 1934-38, Soviet butter exports averaged more than 46 million and in 1913 exceeded 172 million pounds.

Much less attention has been given to production of such dairy products as cheese and dry, condensed, and evaporated milk. In 1956, for instance, only 72 million pounds of dry milk, 234 million pounds of condensed and evaporated milk, and 272 million pounds of factory cheese were produced in the Soviet Union,[10] compared with 1,663 million, 3,646 million, and 1,388 million pounds, respectively, in the United States.

On the distribution side, especially with respect to fluid milk in the cities, the Soviets have been beset by difficulties arising from seasonal variations in supplies and from inadequate or inefficient handling facilities.

[10] Molochnaya Promyshlennost, No. 9, 1957, p. 31, and No. 11, 1957, p. 43.

TABLE 4.--Creamery butter production in USSR and United States, selected years

Year	U.S.S.R.[1]	United States
	Million pounds	*Million pounds*
1940	498	1,837
1950	741	1,386
1951	783	1,203
1952	818	1,188
1953	842	1,412
1954	858	1,449
1955	1,021	1,383
1956	1,224	1,413
1957	1,398	1,413
1958	1,426	[2] 1,386

[1] Territory within boundaries of that year.
[2] Preliminary.

Official sources.